

What is Claimed:

1. A method for predicting transformer performance, comprising:
receiving information representative of a plurality of built transformers, the information comprising a design specification for each built transformer, and measured test information for each built transformer;
receiving a second transformer design specification; and
determining, via an intelligent system, a predicted test result for the second transformer design specification based on the second transformer design specification and the information representative of the plurality of built transformers.
2. The method as recited in claim 1, wherein the intelligent system comprises a neural network.
3. The method as recited in claim 1, wherein the intelligent system comprises a genetic algorithm.
4. The method as recited in claim 1, wherein the intelligent system comprises fuzzy logic.
5. The method as recited in claim 1, wherein receiving the second transformer design specification comprises receiving, from a user interface, the second transformer design specification.
6. The method as recited in claim 1, wherein the information representative of a plurality of built transformers further comprises manufacture information for each built transformer.
7. The method as recited in claim 6, wherein the manufacture information for each built transformer comprises at least one of the group of an indication of a manufacturing plant associated with the built transformer, an indication of a piece of manufacturing equipment associated with the built transformer, an indication of a calibration date of manufacturing equipment associated with the built transformer, and an indication of a retooling date of manufacturing equipment associated with the built transformer.
8. The method as recited in claim 1, wherein the information representative of a plurality of built transformers further comprises as-built information for each built transformer.

9. The method as recited in claim 1, wherein the measured test information for each built transformer comprises at least one of the group of measured transformer load loss, measured transformer impedance, measured transformer ratio, measured transformer turn-to-turn faults, measured transformer high-potential test results, measured transformer double induced test results, measured transformer impulse test results, measured transformer heat run test results, measured transformer sound level, and measured transformer short circuit test results.
10. The method as recited in claim 1, wherein determining the predicted test result comprises determining the predicted test result without using a model based on theoretical relationships.
11. The method as recited in claim 1, further comprising:
receiving a manufacturing specification for the second transformer design; and wherein
determining the predicted result comprises determining, via an intelligent system, a
predicted test result for the second transformer design specification based on the second
transformer design specification, the information representative of the plurality of built
transformers, and the manufacturing specification for the second transformer design.
12. A system for predicting transformer performance, comprising:
a data store comprising information representative of a plurality of built transformers, the
information comprising a design specification for each built transformer and measured test
information for each built transformer; and
an intelligent system in communication with the data store, the intelligent system
configured to perform:
receiving a second transformer design specification; and
determining a predicted test result for the transformer design based on the second
transformer design specification and the information representative of the plurality of built
transformers.
13. The system as recited in claim 12, wherein the intelligent system comprises a neural
network.
14. The system as recited in claim 12, wherein the intelligent system comprises a genetic
algorithm.
15. The system as recited in claim 12, wherein the intelligent system comprises fuzzy logic.

16. The system as recited in claim 12, further comprising a user interface in communication with the intelligent system that receives the second transformer design specification.
17. The system as recited in claim 12, wherein the information representative of a plurality of built transformers further comprises manufacture information for each built transformer.
18. The system as recited in claim 17, wherein the manufacture information for each built transformer comprises at least one of the group of an indication of a manufacturing plant associated with the built transformer, an indication of a piece of manufacturing equipment associated with the built transformer, an indication of a calibration date of manufacturing equipment associated with the built transformer, and an indication of a retooling date of manufacturing equipment associated with the built transformer.
19. The system as recited in claim 12, wherein the information representative of a plurality of built transformers further comprises as-built information for each built transformer.
20. The system as recited in claim 12, wherein the measured test information for each built transformer comprises at least one of the group of measured transformer load loss, measured transformer impedance, measured transformer ratio, measured transformer turn-to-turn faults, measured transformer high-potential test results, measured transformer double induced test results, measured transformer impulse test results, measured transformer heat run test results, measured transformer sound level, and measured transformer short circuit test results.
21. The system as recited in claim 12, wherein determining the predicted test result comprises determining the predicted test result without using a model based on theoretical relationships.
22. The system as recited in claim 12, the intelligent system is further configured to perform: receiving a manufacturing specification for the second transformer design; and wherein determining the predicted result comprises determining a predicted test result for the second transformer design specification based on the second transformer design specification, the information representative of the plurality of built transformers, and the manufacturing specification for the second transformer design.